The Establishment and Maintenance of Division of Labour in the Indian Paper Wasp *Ropalidia marginata*

Prof. Raghavendra Gadagkar
Centre for Ecological Sciences, Indian Institute of Science, Bangalore

1st March 2024, Friday; 4-5 pm
Venue: AB2 5A

Abstract: Social insects such as ants, bees, wasps, and termites have achieved unparalleled ecological success, dominating terrestrial ecosystems worldwide. A significant factor that has made this possible is their efficient division of labour. Firstly, they exhibit a reproductive division of labour such that only one or a small number of individuals reproduce, leaving the remaining sterile workers free to undertake the tasks of nest building, colony defence, brood care and foraging. Secondly, they also exhibit non-reproductive division of labour such that different sub-groups of workers specialise in undertaking subsets of non-reproductive tasks. The twin benefits of task specialisation and parallel processing made possible with the division of labour help them to outperform their solitary counterparts. Using the Indian paper *Ropalidia marginata,* we have attempted to understand how reproductive and non-reproductive divisions of labour are established in newly founded colonies and maintained in established colonies with many new-generation individuals.